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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,460	08/03/2001	Uwe Sydon	2001P11177US	1376

7590 07/25/2006

Siemens Corporation
Attn: Elsa Keller, Legal Administrator
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EXAMINER	
ZEWDU, MELESS NMN	

ART UNIT	PAPER NUMBER
2617	

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/922,460	SYDON, UWE	
	Examiner	Art Unit	
	Meless N. Zewdu	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-10,12 and 14-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 6-10, 12, and 14-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is in response to the communication filed on 5/9/06.

2. Claims 11 and 13 previously cancelled.

3. Claim 5 has been cancelled in the current amendment.

4. Claims 1-4, 6-10, 12 and 14-22 are pending in this action.

Claim Objections

Claim 6 is objected to because of the following informalities: the claim depends on a cancelled claim 5. For examination purpose, claim 6 has been made to depend on claim 1. Appropriate correction is required.

DETAILED ACTION

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 10, 15, 17, 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amirijoo et al. (Amirijoo) (US 6,728,217 B1) in view of Khaleghi et al. (Khaleghi) (US 6,704,328 B1).

As per claim 10: Amirijoo discloses an air interface (abstract) comprising:

at least one logical communication channel configured to communicate a signal (see fig. 1, element 12; col. 3, lines 51-61), wherein the communication is based upon signal quality information about data communicated wit the signal (see col. 8, lines 23-61). But, Amirijoo does not explicitly teach about a control channel that assigns a data rate to each of the at least one logical communication channel, the control channel being configured to change the data rate assigned to each of the at least one logical communication channel, as claimed by applicant. However, in a related field of endeavor, Khaleghi teaches about a signaling scheme comprising a signaling/control message wherein the control message is configured to contain a plurality of assignments/parameters, including rate, channel assignment and time period information (see col. 3, lines 1-25), wherein, the data rate increases/changes as power increases (see abstract; col. 4, lines 22-45). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made modify the teaching of Amirijoo with that of Khaleghi for the advantage of smoothly transmitting bursty data in a wireless communications system using a corresponding signaling technique/method (see col. 1, lines 8-11).

As per claim 15: Khaleghi teaches about an air interface, further characterized in that the control channel includes interfered carrier/channel information (see col. 3, lines 1-25).

As per claim 17: the features of claim 17 are similar to the features of claim 10, except claim 17 includes a base station which is taught by Amirijoo (see fig. 1). Furthermore, the feature "without a reduction in sensitivity characteristic to switching modulation scheme", recited in the preamble, is considered as an intended benefit since the feature does not develop/enhance the body of the claim. Hence, claim 17 is ejected on the same ground and motivation as claim 10.

As per claim 18: Amirijoo teaches a communication system, further characterized in that the air interface includes a high data rate communication channel (see col. 8, line 62-col. 9, line 9).

As per claim 22: Amirijoo teaches a communication device, further characterized in that the communication device is a personal digital assistant (see fig. 1, element 30).

Claims 1, 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amirijoo in view of Khaleghi and further in view of Mizoguchi (US 6,360,077 B2).

As per claim 1: the features of claim 1 are similar to the features of claim 10, except claim 10 is an apparatus and claim 1 is a method claim which steps are to be followed by the apparatus of claim 10. Hence, since the method requires the apparatus in order to be executed, claim 1 is rejected on the same ground and motivation as claim 10. In addition, "**the control channel including interfered carrier information**", recited in claim 1, is a difference feature not explicitly taught by the references applied in the

rejection of claim 10. However, in a related field of endeavor, Mizoguchi teaches about a mobile radio communication device provided with functions for detecting and informing interference, wherein the mobile radio communication device, using a control channel, informs its base station when the downlink and/or uplink channel is interfered (see col. 12, lines 30-41; col. 12, line 58-col. 13, line 31). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references with the teaching of Mizoguchi so as to enable mobile radio communication devices to detect and report the occurrence of interference in the downlink/uplink frequency channels/s (see col. 1, lines 7-16).

As per claim 2: Amirijoo teaches a method, further comprising providing a high data rate channel (abstract; col. 3, lines 40-61; claim 5).

As per claim 9: Amirijoo teaches a method of signal communication between a portable telephone and a base station (see fig. 1, elements 24 and 20).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1 and 17 above, and further in view of Honkasalo et al. (Honkasalo) (US 5,859,843).

As per claim 6: the references applied to claim 1 do not explicitly teach about a method, wherein the selected data rate is a multiple of a basic data rate, as claimed by applicant. However, in a related field of endeavor, Honkasalo teaches about a framing technique for multi-rate CDMA communication system, wherein a variable data rate is provided/crated as a multiple of a basic data rate (see entire document, particularly, col. 5, lines 6-24). Therefore, it would have been obvious for one of ordinary skill in the

art at the time the invention was made to further modify the above references with the teaching of Honkasalo for the advantage of creating a communication frame structure that that can support a number of different physical layer data rates (see col. 7-11).

Claims 4, 13, 16, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to claims 1, 10 and 17 above, and further in view of Raith et al. (Raith) (US 7,042,963 B1).

As per claim 4: the references applied to claims 1, 10, and 17 do not explicitly teach about a method wherein the control channel operates at a low data rate, as claimed by applicant. However, in a the same field of endeavor, Raith teaches about a method and apparatus for decoding variably-decoded signals based on prior communication, by utilizing control signal/s wherein the control signals include a low bit rate 'slow associated control channel' (SACCH) (see col. 2, lines 42-58). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to utilize slow speed (low data rate) control channel as taught by Raith for the advantage of saving bandwidth.

As per claim 12: Raith teaches that in a GSM protocol, a data type information is provided, i. e., in an air interface (wireless link), the information about data communicated with the signal comprises data type information (see col. 2, line59-col. 3, line 9).

As per claim 16: Raith teches an air interface (wireless link), further characterized in that the control channel uses cyclic redundancy checks (CRC) to determine whether the at least one logical communication channels are disturbed (col. 5 lines 26-38; col.

6, lines 21-32). The CRC, in Raith's reference, is used as an error correction technique within the control signal.

As per claim 19: the feature of claim 19 is similar to the feature of claim 4. Hence, claim 19 is rejected on the same ground and motivation as claim 4.

Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to claims 1, 10 and 17 above and further in view of Rezaiifar et al. (Rezaiifar) (US 6,526,030 B2).

As per claim 7: the above references do not explicitly teach about a method, further characterized in that logical communication channels having a high data rate communicate data information and logical communication channels having a low data rate communicate voice information, as claimed by applicant. However, in the same field of endeavor, Rezaiifar teaches that fundamental (low speed/rate) physical/logical channels can be made variable channels and can be utilized for transmitting voice and data traffic (abstract; col. 7, lines 16-24). It is clear for one of ordinary skill in the art that a variable channel includes low and high data rate transmission wherein the lower rate, in this case is voice data, and the higher rate is non-voice. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references with the teaching of Rezaiifar for the advantage of providing a channel structure which minimizes processing delay for high speed transmission (see col. 4, lines 12-14).

As per claim 20: the feature of claim 20 is similar to the feature of claim 7. Hence, claim 20 is rejected on same ground and motivation as claim 7.

Claims 3, 8, 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to claims 1 and 17 above, and further in view of Sakoda et al. (Sakoda) (US 6,563,881 B1). For examination purposes, claim 8 is considered firs.

As per claim 8: the references applied to claims 1 and 17 do not explicitly teach about a high data rate between 32 k bits/sec and 256 k bits/sec and a low data rate between 16 k bits/sec and 32 k bits/sec., as claimed by applicant. However, in the same field of endeavor, Sakoda teaches about communication method and transmitter with transmission symbols arranged at intervals on a frequency axis, wherein a multi-carrier transmission rate (see col. 4, lines 39-59) wherein various data rates are provided, including 32 kbps, 64 kbps, 96 kbps, and 128 kbps (see col. 9, lines 12-27; col. 9, line 50-col. 10, line 8) and including 256 kbps (see col. 11, lines 33-66). Although the range arrangement is not provided as presented by applicant, this issues as a difference is not patentable since the entire range of data rate reads on the claimed feature. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references with the teaching of Sakoda for the advantage of conducting communication in multiple channels using multi-carrier signal having sub-carriers, wherein the transmission symbols of each channel on a frequency axis are arranged at intervals (see col. 4, lines 39-59).

As per claim 21: the features of claim 21 are similar to the features of claim 8. Hence, claim 21 is rejected on the same ground and motivation as claim 8.

As per claim 3: Sakoda teaches an air interface (wireless link) wherein the communicated signal is transmitted using a frequency hopping method to transmit the signal over the plurality of logical communication channels (see col. 4, lines 39-59; col. 7, lines 38-45).

As per claim 14: the feature of claim 14 is similar to the feature of claim 3. hence, claim 14 is rejected on the same ground and motivation as claim 3.

Response to Arguments

Applicant's arguments with respect to claims 1-4, 6-10, 12 and 14-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meless N. Zewdu whose telephone number is (571) 272-7873. The examiner can normally be reached on 8:30 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corsaro Nick can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Meless zewdu Zewdu, Meless 7-21-06

Examiner

21 July 2006.